Plant Pathology Circular No. 315 Fla. Dept. Agric. & Consumer Serv.
January 1989 Division of Plant Industry

CYLINDROCLADIUM LEAFSPOT ON PALMS

R. M. Leahy[1]

A wide variety of palms are used in Florida as landscape accent plants and are very popular as indoor foliage. Most palms are grown from seed while other mature palms may be harvested in the wild, transported and sold as an instant landscape for office buildings, hotels and private residences. In any case, palms are an expensive commodity and any biotic or abiotic problem that afflicts them can reduce their value (2).

SYMPTOMS: A number of fungal leaf spots occur on various members of the Palmae. Two species of Cylindrocladium can cause severe leaf spotting on several palms. Cylindrocladium pteridis Wolf. infects Arecastrum romanzoffianum (Cham.) Becc., Chamaedorea elegans Mart., Cocos nucifera L., Howea forsterana (C. Moore & F. J. Muell. Baca., and Washingtonia robusta H. Wendl. Cylindrocladium scoparium Morgan infects Acromia sp., Areca sp., Arenga sp., Arikuryroba sp., Attalea sp., Chamaerops sp., Coccothrinax sp., Copernicia sp., Dictyosperma sp., Elaeis sp., Howea forsterana (C. moore & F. J. Muell.) Becc., Livistona sp., Pritchardia sp., Ptychosperma sp., and Serenoa sp. (1). The leaf spots caused by these two species of Cylindrocladium differ markedly in the foliar symptoms produced. Cylindrocladium pteridis causes frond lesions that are circular to oval, slightly sunken, brown to dark brown in color, and are 2-15mm in diameter (4). Cylindrocladium scoparium on the other hand, causes oval to elongated frond lesions which are very light tan in color with a dark, sometimes water soaked margin. A chlorotic halo may also be induced. These lesions tend to be much larger than those caused by C. pteridis. Spores of these fungi can be windblown or disseminated to a new infection court by splashing rain or overhead irrigation.

Fig. 1. Leaf spots caused by Cylindrocladium scoparium are elongated with bleached centers and dark borders. They are frequently accompanied by watersoaked margins.

[1]Biological Scientist II, Bureau of Plant Pathology, P. O. Box 1269, Gainesville, FL 32602

Because this fungus can survive saprophytically in old, previously infected fronds this leaf litter can serve as an inoculum reservoir for future infections or secondary spread of the disease. As a result sanitation is a necessary step in good disease control. Under environmental conditions of high moisture or humidity and warm temperatures, the Cylindrocladium fungus can be seen as small white tufts sporulating within the expanding frond lesions.

CONTROL: Effective control of Cylindrocladium leaf spot includes a few simple cultural practices. Sanitation is extremely important. Old infected fronds which remain attached to the host palm should be removed, and any leaf litter on the ground should be discarded. Overhead watering should be avoided or applied only in the early morning hours so that plants can dry off during the day. This will help slow down fungal growth and disease spread.

EPA registered chemicals for use on palms are limited. Benomyl has a broad label clearance on ornamentals, including palms. Bordeaux mix, basic copper sulfate and Chipco 26019 are all registered for various leaf spots on all types of palms, and Daconil is registered specifically for leaf spots of Chamaedorea spp. Among these fungicides, benomyl or Chipco 26019 are probably the most effective. The use of a spreader sticker will also increase their effectiveness (3).

SURVEY & DETECTION: Cylindrocladium leaf spots may be circular or oval to elongated. Smaller circular lesions may be dark brown and slightly sunken. Elongated lesions exhibit a bleached or tan center and a dark, possibly watersoaked margin. A chlorotic halo may be present with leaf spots caused by both Cylindrocladium pteridis and C. scoparium. Sporulation of these fungi may be seen in humid, moist, warm weather as small white tufts within leaf lesions.

LITERATURE CITED

1. Alfieri, S. A. Jr., K. R. Langdon, C. Wehlburg, and J. W. Kimbrough. 1984. Index of Plant Diseases in Florida. Florida Department of Agriculture & Consumer Services, Division of Plant Industry. Bulletin 11. 389 pp.

2. McCurrach, J. C. 1960. Palms of the World. p. 265 Harper & Brothers, New York. 290 pp.

3. Simone, C. W. 1986-1987 Fungicides For Use on Ornamentals. Florida Cooperative Extension Service. Institute of Food and Agricultural Sciences. Circular 484-C. p. 17 and p. 31.

4. Sobers, E. K. 1968. Morphology and Host Range of Cylindrocladium pteridis. Phytopathology. 58:1265-1270.

Contribution No. 636, Bureau of Plant Pathology.

This publication was issued at a cost of $ 479.42 or $ 0.14 per copy to provide information on proper recognition of plant pests. PI89T-06